

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
24 March 2005 (24.03.2005)

PCT

(10) International Publication Number
WO 2005/025451 A2

(51) International Patent Classification⁷: A61F

Turnpid Road, Golden Valley, MN 55416 (US). **SONG, Yong** [US/US]; 8567 Cortland Road, Eden Prairie, MN 55344 (US). **TAYLOR, Alan** [US/US]; 6405 Kirby Oaks Drive, Memphis, TN 38119 (US).

(21) International Application Number: PCT/US2004/030024

(74) Agents: **GOLDMAN, Philip, M.** et al.; Fredrikson & Byron, P.A., 200 South Sixth Street, Suite 4000, Minneapolis, MN 55402 (US).

(22) International Filing Date: 13 September 2004 (13.09.2004)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/502,003	11 September 2003 (11.09.2003)	US
60/571,305	14 May 2004 (14.05.2004)	US
60/579,695	15 June 2004 (15.06.2004)	US
60/584,963	2 July 2004 (02.07.2004)	US
60/588,075	15 July 2004 (15.07.2004)	US
60/588,878	16 July 2004 (16.07.2004)	US
60/592,158	29 July 2004 (29.07.2004)	US

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/025451 A2

(54) Title: METHOD AND MATERIALS FOR INTERPOSITIONAL ARTHROPLASTY IMPLANT

(57) Abstract: A method and apparatus for the creating or modification of the wear surfaces of orthopedic joints are disclosed. An implant in accordance with an exemplary embodiment of the present invention provides one or more biomaterials defining a first major surface adapted to be positioned as an articulating surface against a medial condyle of a femur, and a second major surface adapted to mate with a tibial plateau of a tibia. The surfaces can provide the same or different physical-mechanical properties, as by the use of a composite of two or more biomaterials having the same or different properties. Implants in accordance with the present invention include hip implants. The biomaterial may be in particulate form for use as a bulking agent, and comprise one or more drugs. The invention also includes methods of predicting wear.